REMARKS

Claims 1-6 and 8-15 are pending in this application. Claims 1-6 and 8-14 were rejected under 35 U.S.C. §112, first paragraph. Claims 1-6 and 8-15 were rejected under 35 U.S.C. §112, second paragraph. Claims 1-4, 6, and 8-14 were rejected under 35 U.S.C. §102(e). Claims 5 and 11-15 were variously rejected under 35 U.S.C. §103.

By this amendment, claims 1 and 11 have been amended without prejudice or disclaimer of any previously claimed subject matter. Support for the amendments can be found, *inter alia*, throughout the specification.

The amendments are made solely to promote prosecution without prejudice or disclaimer of any previously claimed subject matter. With respect to all amendments and cancelled claims, Applicant has not dedicated or abandoned any unclaimed subject matter and moreover has not acquiesced to any rejections and/or objections made by the Patent Office. Applicant expressly reserves the right to pursue prosecution of any presently excluded subject matter or claim embodiments in one or more future continuation and/or divisional application(s).

Applicant has carefully considered the points raised in the Office Action and believes that the Examiner's concerns have been addressed as described herein, thereby placing this case into condition for allowance.

Rejections under 35 U.S.C. §112, first paragraph

Claims 1-6 and 8-14 were rejected under 35 U.S.C. §112, first paragraph, for allegedly not enabling any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention commensurate in scope with the claims. Applicant respectfully traverses this rejection.

In order to make a rejection, the Examiner has the initial burden to establish a reasonable basis to question the enablement provided for the claimed invention. *In re Wright*, 999 F2d 1557,

27 USPQ2d 1510 (Fed. Cir. 1993); M.P.E.P. §2164.04. As stated by the court, "it is incumbent upon the Patent Office, whenever a rejection on this basis is made, to explain *why* is doubts the truth or accuracy of any statement in a supporting disclosure and to back up assertions of its own with acceptable evidence or reasoning which is inconsistent with the contested statement." *In re Marzocchi*, 439 F.2d 220, 224, 169 USPQ 367, 370 (COCA 1971), original emphasis.

As support for the rejection, the Examiner states on page 3 of the Office Action that, in view of the teaching in the art, "one would not expect the administration of ISS alone to induce a specific immune response against RSV." Examples 1 and 2 of the specification show that administration of a composition of ISS and an excipient, without an RSV antigen, does indeed result in a suppression of an RSV infection. Suppression of the RSV infection is demonstrated by a reduction in the RSV titer in infected tissue after administration of an ISS-containing oligonucleotide as compared to administration of an oligonucleotide not containing an ISS and administration of the excipient alone. This is further supported by the results presented in Dr. Van Nest's Declaration, submitted to the Office on January 14, 2003.

Thus, despite the Examiner's comment about the teaching in the art, Applicant has demonstrated the claimed invention and submits that the specification adequately describes to the skilled artisan how to make and use the claimed invention.

Further, Applicant respectfully submits that the Examiner has not provided acceptable documentation or sound scientific reasoning to support any doubt of the teachings of the specification as called for in *In re Marzocchi*, 439 F.2d 220, 169 USPQ 367 (CCPA 1971). Unless such documentation and/or scientific reasoning are adduced, the statements made in the specification are to be taken at face value. Thus, Applicant respectfully submits that a *prima facie* case for lack of enablement has not been established and that the claimed invention is enabled by the specification.

Thus, Applicant submits that the pending claims are in compliance with the enablement requirements. Accordingly, Applicant respectfully requests reconsideration and withdrawal of the rejections under 35 U.S.C. §112, first paragraph.

Rejection under 35 U.S.C. §112, second paragraph

Claims 1-6 and 8-15 were rejected under 35 U.S.C. §112, second paragraph, as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Applicant respectfully traverses this rejection.

Although Applicant believes that the claims were sufficiently definite when considered in view of the specification and the understanding of those of skill in the art, Applicant has attempted to respond to the concerns of the Examiner in order to enhance clarity and to facilitate disposition of the present case. Claims 1 and 11 have been amended to include the conventional notation of "5'-CG-3' " to indicate the order of the cytosine and guanine dinucleotide relative to each other in the polynucleotide sequence.

In view of the foregoing, Applicant respectfully requests reconsideration and withdrawal of the rejection under 35 U.S.C. §112, second paragraph.

Rejection under 35 U.S.C. §102(e)

Claims 1-4, 6 and 8-14 were rejected under 35 U.S.C. §102(e) as allegedly being anticipated by Davis *et al.* (U.S. Pat. No. 6,406,705, "Davis"). Applicant respectfully traverses this rejection.

For a claim to be anticipated by a reference, the reference much teach each and every element of the claim. Further, the elements must be arranged as required by the claim. M.P.E.P. §2131.

The claimed invention is directed to methods of suppressing a respiratory syncytial virus (RSV) infection in an individual who has been exposed to RSV comprising administering an ISS-

containing polynucleotide composition in an amount sufficient to suppress an RSV infection. The polynucleotide is greater than six and less than about 200 nucleotides in length and the ISS comprises the sequence 5'-CG-3'. Neither RSV antigen nor an immunostimulatory cytokine are administered in conjunction with the polynucleotide composition.

Davis describes methods for inducing an immune response which involve a synergistic combination of a CG-containing oligonucleotide and a non-nucleic acid adjuvant. In the Summary section of the patent, Davis states that the method "includes the steps of administering to the subject in order to induce an antigen specific immune response an antigen and a combination of adjuvants, wherein the combination of adjuvants includes at least one oligonucleotide containing at least one unmethylated CpG dinucleotide and at least one non-nucleic acid adjuvant, and wherein the combination of adjuvants is administered in an effective amount for inducing a synergistic adjuvant response." See, for example, Davis col. 2, lines 18-30.

The Examiner supports this rejection by pointing to various elements of the claimed invention mentioned throughout Davis. However, Applicant respectfully submits that these elements are not specifically combined in Davis so as to constitute anticipation of the claimed invention. The Examiner cites col. 3, lines 4-6, where Davis states that "the Th1 response can be induced using CpG DNA alone, or CpG DNA in combination with a non-nucleic acid adjuvant at the same or different site or at the same or different times." Because an "adjuvant" is, by definition, administered with an antigen, "CpG DNA in combination with a non-nucleic acid adjuvant" must mean "CpG DNA in combination with a non-nucleic acid adjuvant *and an antigen*," and therefore "CpG DNA alone" must mean "CpG DNA *in combination with an antigen*" (i.e., CpG DNA alone *as an adjuvant*). Accordingly, contrary to the Examiner's assertion, Davis does not teach administration of an ISS without an antigen.

The Examiner also cites col. 9, lines 29-32, apparently as indicating that the composition is administered in an amount sufficient to suppress an RSV infection. Office Action, page 4. This

citation however, concludes a section in Davis describing hepatitis B virus (HBV) and states that "the synergistic combination of adjuvants which induces potent Th1 responses, including CTL, is useful for treating a subject having an infection such as HBV." Thus, the context of these citations in Davis is not in keeping with the concept of the claimed invention. Applicant respectfully submits that Davis does not teach the elements as arranged in the claimed invention.

Further, in order to anticipate the claims, the claimed subject matter must be disclosed in the reference with "sufficient specificity to constitute an anticipation under the statute." If the claims are directed to a narrow range, the reference teaches a broad range, and there is evidence of unexpected results within the claimed narrow range, depending on the facts in the case, it may be reasonable to conclude that the narrow range is not disclosed with "sufficient specificity" to constitute anticipation of the claims. The unexpected results may also render the claims unobvious. M.P.E.P. §2131.03(2).

Applicant respectfully submits that Davis does not teach the claimed invention with sufficient specificity so as to anticipate of the invention. Davis includes RSV as an example of Paramyxoviridae in a very extensive list of infectious viruses (see, col. 15 to col. 23) for which the invention may be of use. Davis provides no specific indication that administration of an ISS as claimed would be effective in suppressing an RSV infection. In fact, immediately following RSV in Davis' list is "Orthomyxoviridae (e.g. influenza viruses)." Both RSV and influenza virus are types of respiratory viruses. As the Examiner noted in the Office Action dated September 24, 2002, the methods taught in Examples 4 and 5 of the specification were not effective in suppressing an influenza virus infection. Davis, however, does not teach any distinction between RSV, influenza virus and the many other viruses provided on the list and one would not expect any difference between RSV and influenza virus infection suppression according to the teaching of Davis. Thus, the unexpected specificity of the claimed method with regard to suppression of RSV infection relative to influenza virus infection is not taught in or suggested by Davis.

Thus, Applicant submits that Davis does not disclose the claimed invention with sufficient specificity to constitute anticipation.

Accordingly, Applicant respectfully requests reconsideration and withdrawal of the rejections under 35 U.S.C. §102(e).

Rejection under 35 U.S.C. §103(a)

Claims 11-14 were rejected under 35 U.S.C. §103(a) as allegedly unpatentable over Davis. Claims 5 and 15 were rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over Davis in view of Raz et al. (U.S. Pat. No. 6,589,940, "Raz"). Applicant respectfully traverses this rejection.

Claims 11-14 over Davis

Claims 11-14 are directed to a kit for use in the method of the invention comprising a composition comprising an ISS-containing polynucleotide and instruction for administration of the composition to the respiratory tract of an individual. The polynucleotide is greater than six and less than about 200 nucleotides in length and the ISS comprising the sequence 5'-CG-3'. The claimed kit does not contain RSV antigen or an immunostimulatory cytokine.

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, the prior art reference (or references when combined) must teach or suggest all the claim limitations. Second, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Finally, there must be a reasonable expectation of success. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20USPQ2d 1438 (Fed. Cir. 1991); MPEP §2143.

As described above, Davis does not teach or suggest administration of ISS-containing polynucleotide greater than six and less than about 200 nucleotides in length without administration of RSV antigen for use in suppressing an RSV infection. Additionally, Davis does not teach or suggest producing a kit as claimed. Thus, Davis provides no teaching or suggestion of the claimed invention.

Further, Applicant respectfully submits that there is no suggestion or motivation in Davis to modify the teachings therein to arrive at the claimed invention.

Thus, Applicant respectfully submits that a *prima facie* case of obviousness has not been established with regard to claims 11-14.

Claims 5 and 15 over Davis in view of Raz

As outlined herein, Davis does not teach the claimed invention. Raz describes immunostimulatory DNA sequences including a particular immunostimulatory sequence which is the same sequence as SEQ ID NO:1 of the present invention. However, Raz does not teach the use of such compositions for use in suppressing an RSV infection as claimed in the instant invention.

Neither Davis nor Raz specifically teach suppression of an RSV infection through administration of a composition comprising an immunostimulatory oligonucleotide without administration of RSV antigen or cytokine. Accordingly, Applicant respectfully submits that there is no suggestion or motivation in the references to combine or modify the teachings therein to arrive at the claimed invention. Applicant also submits that there is no suggestion or motivation in the art to combine or modify the teachings of each reference to arrive at the claimed invention.

Further, Applicant submits that the combination of Davis and Raz does not teach or suggest all the limitations of the claimed invention.

Thus, Applicant respectfully submits that a *prima facie* case of obviousness has not been established with regard to claims 5 and 15.

In sum, Applicant respectfully submits that a *prima facie* case of obviousness has not been established and respectfully requests reconsideration and withdrawal of the rejections under 35 U.S.C. §103(a).

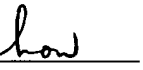
CONCLUSION

In view of the above, each of the presently pending claims in this application is believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to withdraw the outstanding rejection of the claims and to pass this application to issue. If it is determined that a telephone conference would expedite the prosecution of this application, the Examiner is invited to telephone the undersigned at the number given below.

In the event the U.S. Patent and Trademark office determines that an extension and/or other relief is required, applicant petitions for any required relief including extensions of time and authorizes the Commissioner to charge the cost of such petitions and/or other fees due in connection with the filing of this document to Deposit Account No. 03-1952 referencing docket no. 377882000900. However, the Commissioner is not authorized to charge the cost of the issue fee to the Deposit Account.

Dated: August 19, 2004

Respectfully submitted,

By 

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